Track: Prior Authorization (PAS)

Documentation Template and Coverage Rules (DTR) / Coverage Requirements Discovery (CRD)

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Introduction to CRD, DTR, and Prior Auth Scenario

Overview

In this scenario we will walk through the full CRD, DTR, and Prior Auth workflow. This will involve the following pieces of technology:

- FHIR® Querying (https://www.hl7.org/fhir/search.html)
- CDS Hooks (https://cds-hooks.org/)
- SMART App Launch (http://hl7.org/fhir/smart-app-launch/index.html)
- CQL (https://cql.hl7.org/)

The full implementation guides can be found here:

- Coverage Requirements Discovery (CRD): https://build.fhir.org/ig/HL7/davinci-crd/
- Documentation Templates and Rules (DTR): http://build.fhir.org/ig/HL7/davinci-dtr/
- Prior Authorization Support (PAS): https://build.fhir.org/ig/HL7/davinci-pas/

InterOpathon Challenge

Action: Create an innovative solution encompassing one or more of the following IG's: CRD, DTR, and Prior Auth.

Precondition: Follow and complete the technical walkthrough in this document.

Judging Criteria: The solution is innovative, unique, complex, and improves InterOperability (refer to Judging Criteria for further detail).

Example Innovative Solutions:

CRD CDS Service

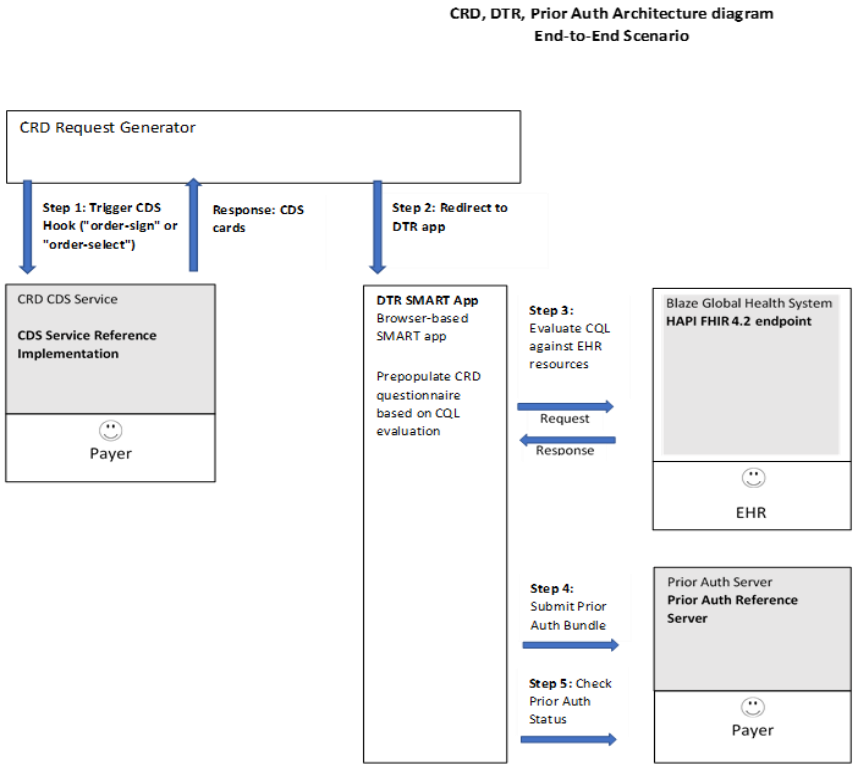
- Intelligent medication substitutions
- Intelligent analytics for evaluating documentation requirements
- Fraud detection
- Wellness (incentivise patients to better manage their health)

DTR SMART App

- Enhanced documentation gathering experience
- Enhanced payer claim management experience

Prior Auth

- Decision support for processing prior auth requests
- Claim analytics (dashboards, reports, etc.)
- Treatment effectiveness analytics



Technical Walkthrough

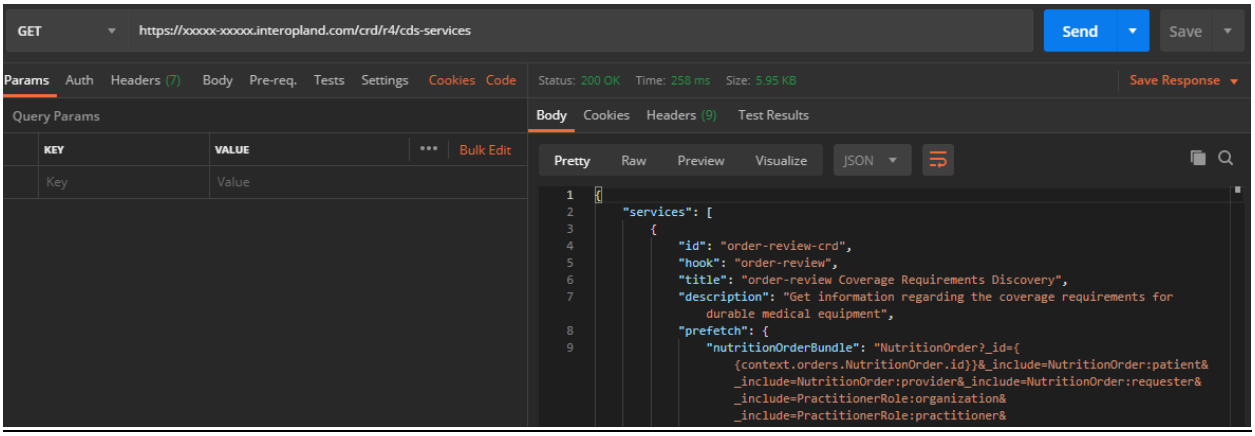
The following walkthrough will take you through the full prior auth flow. These steps can all be completed using the CRD request generator at {{base url}}/crd-req-gen/.

Note: Your base URL will be in the form of https://xxxx-xxxx.interopland.com and can be retrieved from the Interoperability Land portal. It will be the same base URL used by all FHIR® endpoints in your assigned sandbox.

Coverage Requirements Discovery (CRD)

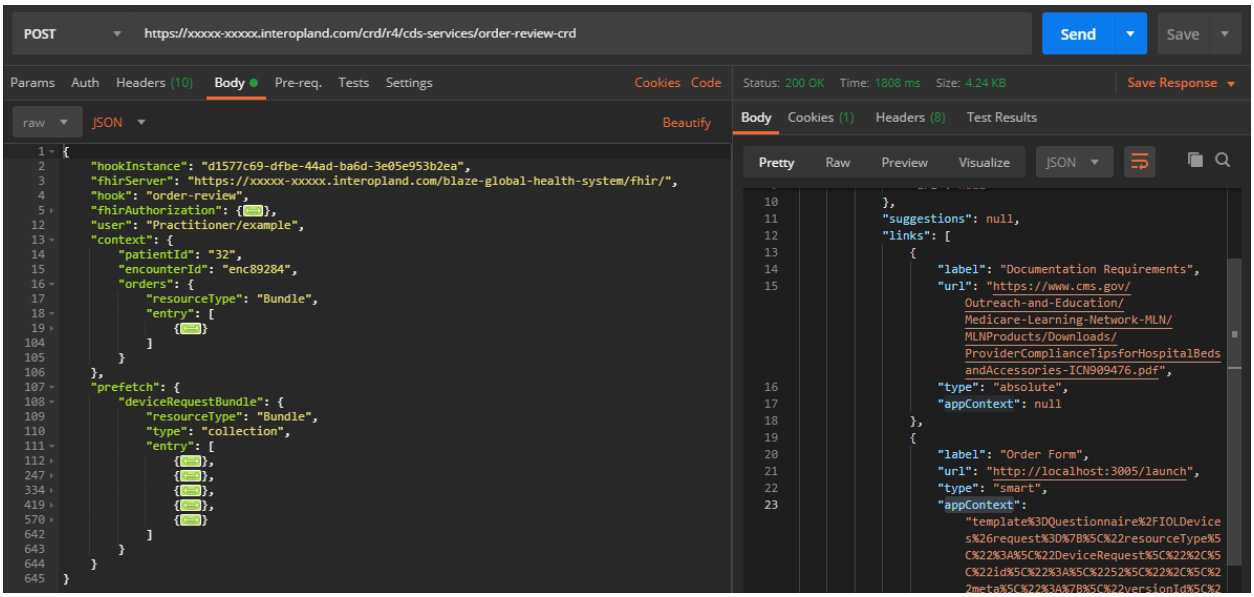
CRD allows healthcare providers to proactively discover the coverage requirements for a given drug, device, or procedure, from their patients' insurance payer.

Step 1: Review the CDS Service Discovery document at {{base url}}/crd/r4/cds-services and note the prefetch requirements for the different hooks.



Step 2: Assemble the JSON request for the CDS Hook of interest. This will include a "prefetch" element containing a FHIR® bundle with all resources described by the "deviceRequestBundle" prefetch requirement from step 1. You can see examples here: https://cds-hooks.org/hooks/order-sign/ and here: https://cds-hooks.org/hooks/order-select/.

Step 3: Submit the hook request to the desired CDS Service endpoint (i.e. {{base url}}/crd/r4/cds-services/order-review-crd) and take note of the returned cards.



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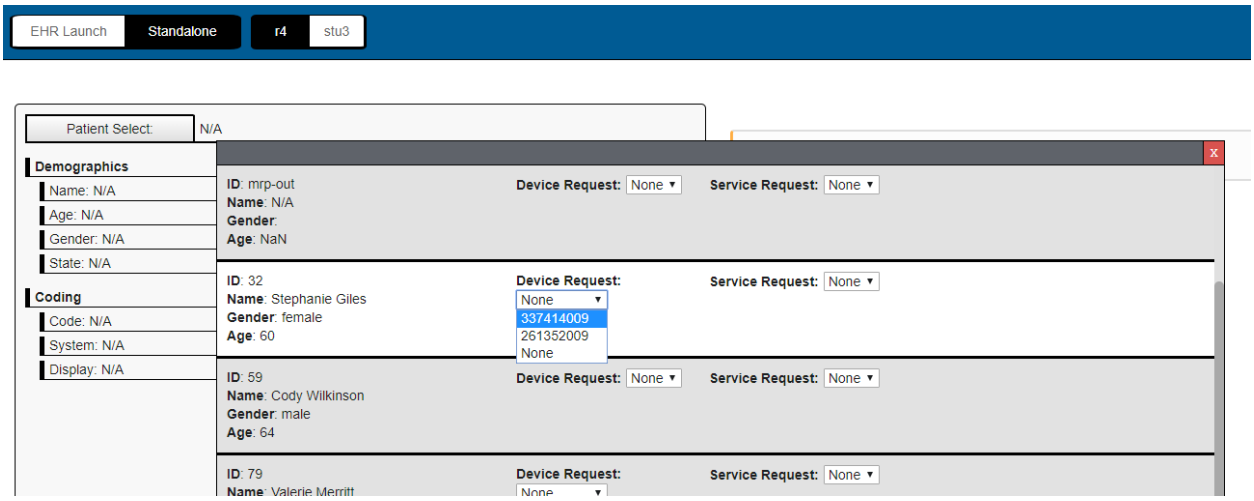
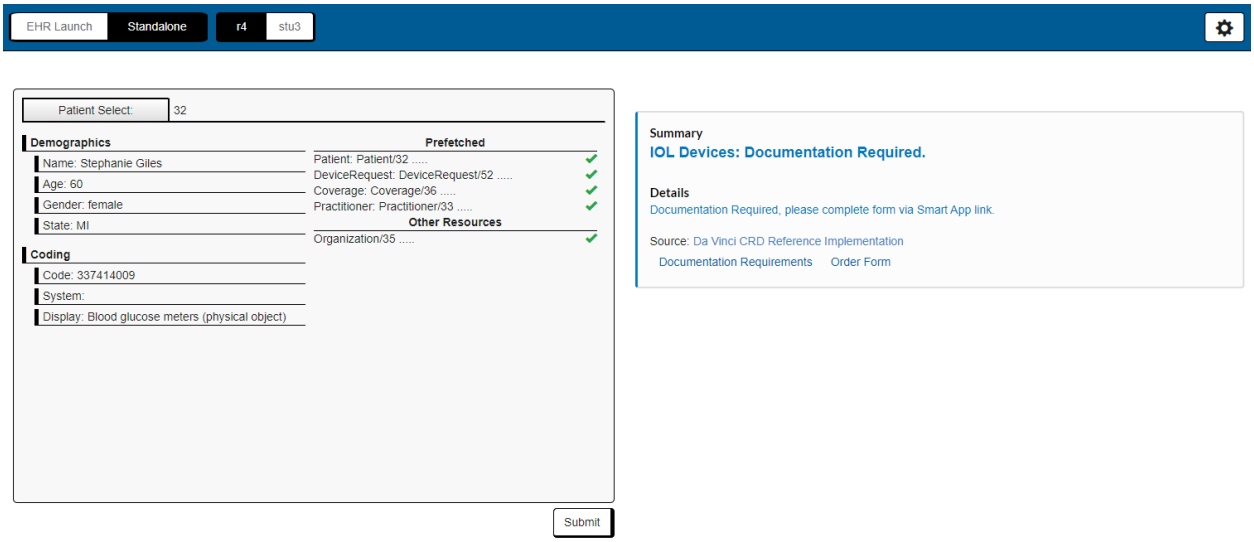
You can also accomplish these steps using the CRD Request Generator by clicking the “Patient Select” button, selecting a patient and device request from the list.



Once you have selected a patient/device request, click the “Submit” button and review the cards displayed.



Documentation Templates & Coverage Rules (DTR)

Within the returned coverage requirements there may be information about the payer’s documentation requirements for the specified order. These rules are in the form of a FHIR® Questionnaire resource augmented with CQL. The DTR SMART app is responsible for interpreting those rules, automatically evaluating the embedded CQL within the EHR, and allowing the provider the opportunity to complete any missing information.

Step 1: Review the cards from the previous step, looking for links of type “smart”, and take note of the appContext.

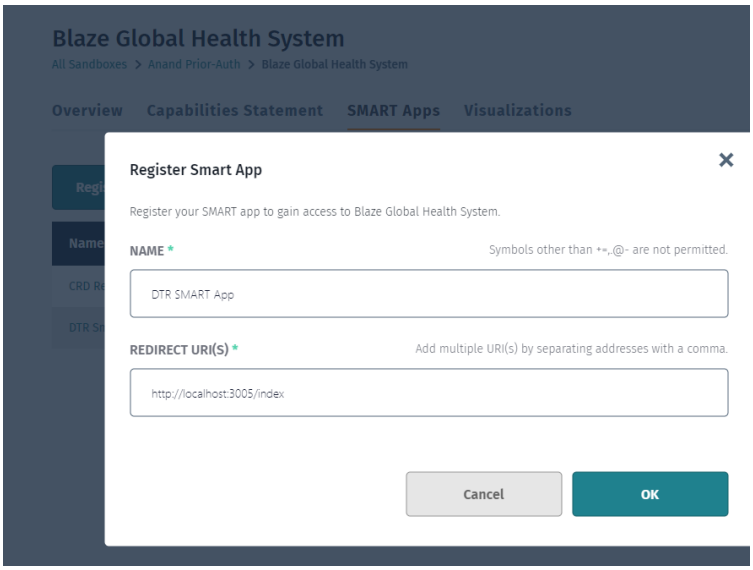

```
{
    "cards": [
        {
            "summary": "IOL Devices: Documentation Required.",
            "detail": "Documentation Required, please complete form via Smart App link.",
            "indicator": "info",
            "source": {
                "label": "Da Vinci CRD Reference Implementation",
                "url": null
            },
            "suggestions": null,
            "links": [
                {
                    "label": "Documentation Requirements",
                    "url": "https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/
                        ProviderComplianceTipsforHospitalBedsandAccessories-ICN909476.pdf",
                    "type": "absolute",
                    "appContext": null
                },
                {
                    "label": "Order Form",
                    "url": "http://localhost:3005/launch",
                    "type": "smart",
                    "appContext":
                        "template%3DQuestionnaire%2FIOLDevices%26request%3D%7B%5C%22resourceType%5C%22%3A%5C%22DeviceRequest%5C%22%2C%5C%22id%5C%22%3A%5C%2252%5C%22%2C%
                        5C%22meta%5C%22%3A%7B%5C%22versionId%5C%22%3A%5C%221%5C%22%2C%5C%22lastUpdated%5C%22%3A%5C%222020-05-03T23%3A32%3A42.
                        739%2B00%3A00%5C%22%2C%5C%22source%5C%22%3A%5C%22%23zV0eYXopaQh6pFka%5C%22%7D%2C%5C%22text%5C%22%3A%7B%5C%22status%5C%22%3A%5C%22generated%5C%22
                        %2C%5C%22div%5C%22%3A%5C%22%3Cdiv+xmlns%3D%5C%5C%5C%22http%3A%5C%2F%5C%2Fwww.w3.org%5C%2F1999%5C%2Fxhtml%5C%5C%5C%22%3EThis+is+a+simple
                        +narrative+with+only+plain
```


Step 2: Within the appContext, the “template” field stores a reference to a FHIR® DTR questionnaire resource (ex. “Questionnaire/HomeOxygenTherapy”). Query the questionnaire resource from the CRD server using a query like the following:

{{base_url}}/crd/fhir/r4/Questionnaire/HomeOxygenTherapy.

Step 3: Create and fill out a QuestionnaireResponse resource by evaluating the embedded CQL and prompt the provider for any missing information.

You can also accomplish these steps using the CRD Request Generator and the DTR SMART App. First, in the IOL portal create a new SMART App under “Blaze Global Health System” and record the client ID.



Next load the DTR app source code from here: https://github.com/Interoperability-Institute/MiHIN-Virtual-Interopathon-2020/tree/master/Interopathon-Tracks/Da-Vinci-CRD-DTR-PAS/DTR-Sample-App

and update the clientId in the launch.js file.

```
// you can enter its secret here. The demo app will pretend it's a confidential
// app (in reality it cannot be confidential, since it cannot keep secrets in the
// browser)
var secret = null; // set me, if confidential

// These parameters will be received at launch time in the URL
var serviceUri = urlUtils.getUrlParameter("iss");
var launchContextId = urlUtils.getUrlParameter("launch");

// Change this to the ID of the client that you registered with the SMART on FHIR authorization server.
var clientId = "20npureeb7iq6t1m4tcf6im42j"; // local client
// clientId = "c7ecff8d-5e91-48f2-b22e-f423c0c4c009"
localStorage.setItem("lastAccessedServiceUri", serviceUri);
if(storedJSON) {
```

You can also update endpointConfig.json with your prior-auth endpoint.

```
Unsaved changes (cannot determine recent change or authors)
[
  {
    "name": "IOL Sandbox",
    "url": "https://xxxxx-xxxxx.interopland.com/prior-auth"
  },
  {
```

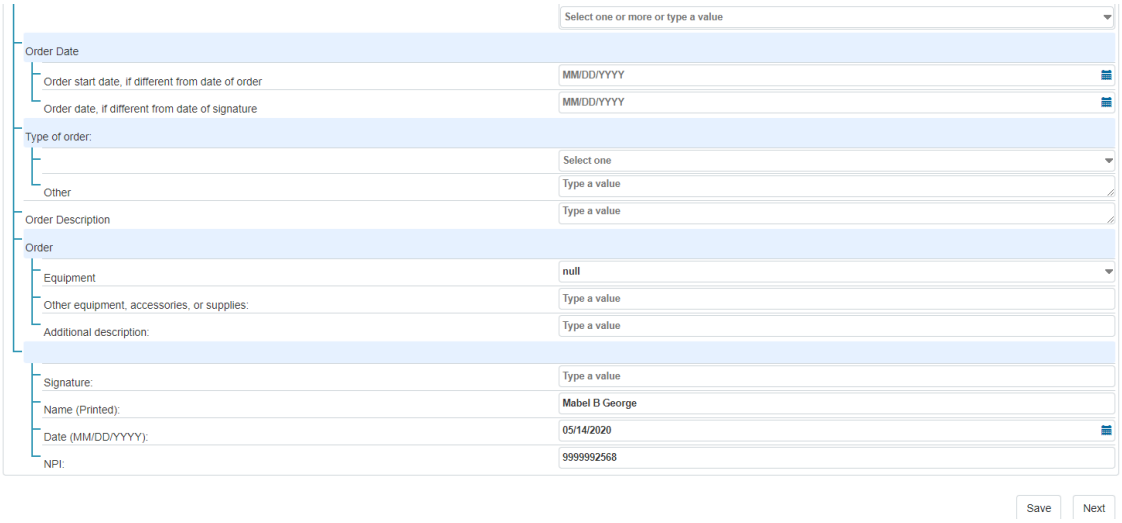
Finally, update “target” field in the webpack.config.dev.js.

```
      { from: /register/, to: "/register.html" }
    ]
  },
  proxy: [
    {
      context: ["/files", "/fhir", "/crd"],
      target: "https://xxxxx-xxxxx.devinteropland.com",
      changeOrigin: true,
      secure: true
    }
```

You can then run the DTR SMART App with the following commands:

npm install
npm start

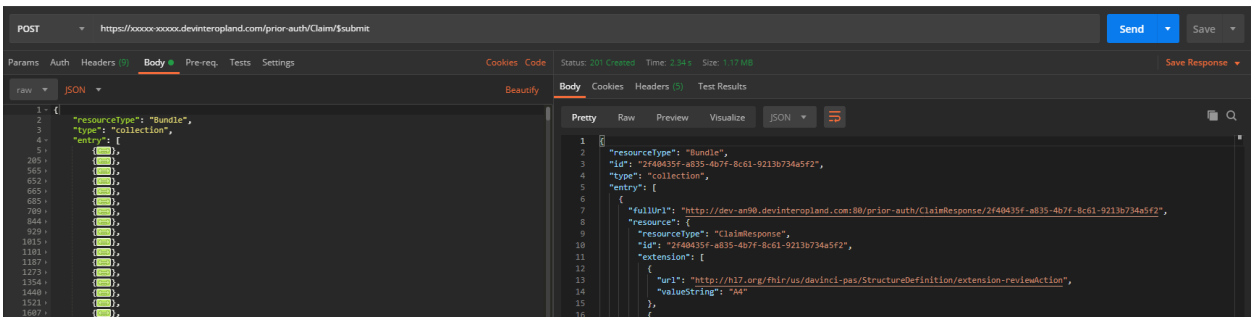
Once the DTR App is running, you should be able to click the “Order Form” link in the CRD Request Generator which will take you to the DTR SMART App to fill out the questionnaire. Click the “Next” button to accept the entered values.



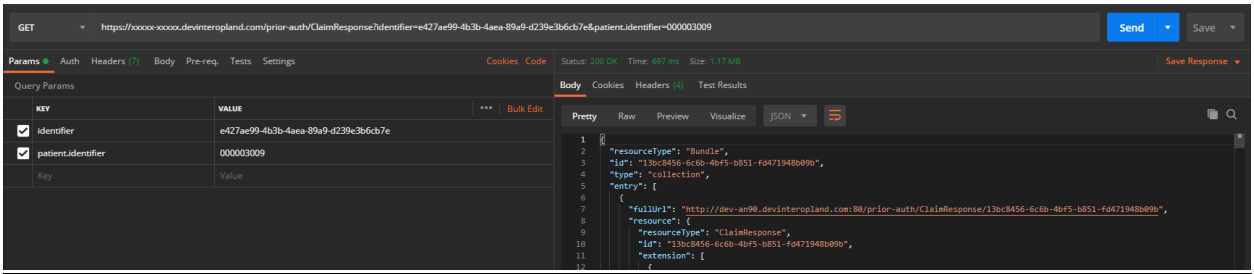
Prior Authorization Support (PAS)

In cases where prior authorization is required for a drug, device, or service referral, PAS enables EHRs to submit that prior authorization request directly to the payer systems.

Step 1: Create a FHIR® bundle that contains a Claim resource that is consistent with the PAS IG, and POST it to the {{base url}}/prior-auth/Claim/$submit endpoint. Take note of the returned ClaimResponse identifier and the Patient identifier.



Step 2: Check the status of the prior authorization request using the {{base url}}/prior-auth/ClaimResponse?identifier=[authorizationresponseid]&patient.identifier=[patientid]&status=active



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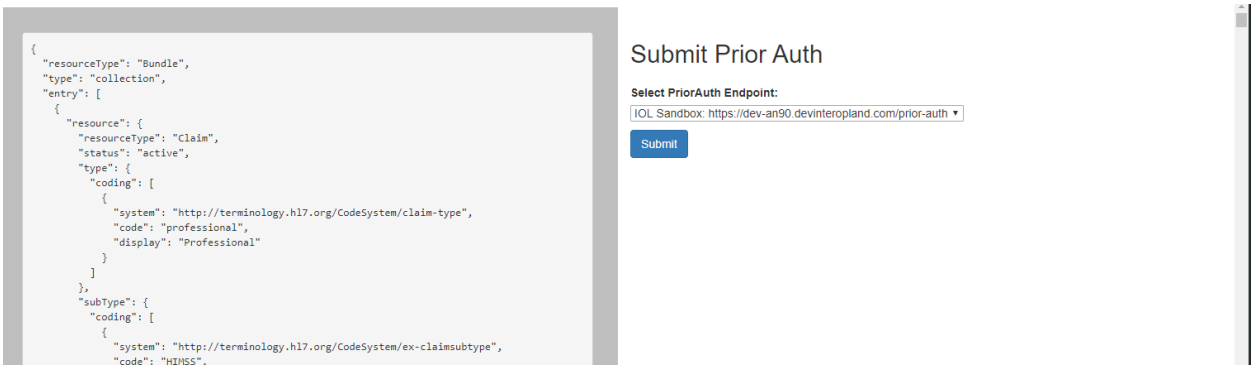
From the DTR SMART App, click the Submit button with your prior auth endpoint selected. This will submit the completed prior auth request. Once submitted you will be given options to subscribe to updates.



Judging Criteria

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Interoperability: APIs and FHIR® Heat Up

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Alignment with Track	Helps to improve Inter-operability	Innovation & Creativity	Use of APIs	User Experience	Technical Difficulty	Presentation or Demo
25%	25%	15%	10%	10%	10%	5%
How aligned was the solution with one of the event Tracks?	Does the team clearly show how their solution could be used to improve interoperabil-ity?	Did the team create some-thing that has not already been created? Is it unique?	Did the team use APIs available to create a solution?	What is the wow factor? Would others be impressed by what was built? How easy is the solution to use?	Is the project technically impressive / complex? Is it remarkable that a team created this solution in the time allowed?	Was the presentation or demo well put together? Did the team seem prepared? How well did they explain the problem and solution? (only judge on content, not video quality)

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